Abstract

In between network devices interconnected by plural optical channels, logical paths are defined according to upper traffic and also priority of the traffic. The network device ~~comprises~~ includes: a frame forming section for reading user packets out of a buffer section composed of plural buffers defined for the respective paths on transfer schedule, and forming path frames having a specified frame length and individual ordinal numbers with respect to each path; a switch for selecting output channels to equally distribute the path frames by round robin scheduling; and data transmitting part ~~means~~ for transmitting data on the logical paths. Thus, it is made possible to realize a frame transfer system capable of performing data transmission, which satisfies QOS (Quality Of Service) required for user traffic, on the WDM networks connected by plural OCHs.